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L1	1	"6173234".pn.	USPAT	OR	ON	2005/12/07 10:07
L2	1	de-19950463-\$ did.	DERWENT	OR	ON	2005/12/07 10:10
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TITLE: Hydrodynamic bearing  
manufacturing method has  
3-dimensional structure for  
providing hydrodynamic  
pressure formed by selective  
removal of coating layer via  
high energy machining beam

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PRIORITY-DATA: 1999DE-1050463 (October 20, 1999)

PATENT-FAMILY:

PUB-NO	PAGES	PUB-DATE	MAIN-IPC
<u>DE 19950463 B4</u>	000	April 15, 2004	
N/A	000	B23P 013/00	
<u>DE 19950463 A1</u>	006	May 10, 2001	
N/A	006	B23P 013/00	
JP 2001159426 A		June 12, 2001	
N/A	008	F16C 033/14	

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-
NO	APPL-DATE	
DE 19950463B4	N/A	
1999DE-1050463	October 20, 1999	

DE 19950463A1	N/A
1999DE-1050463	October 20, 1999
JP2001159426A	N/A
2000JP-0317314	October 18, 2000

INT-CL (IPC): B23K026/00, B23P009/00 ,  
B23P013/00 , F16C017/10 ,  
F16C032/06 , F16C033/12 , F16C033/14 ,  
F16C033/24

ABSTRACTED-PUB-NO: DE 19950463A

BASIC-ABSTRACT:

NOVELTY - The bearing manufacturing method has the surface of one of the 2 cooperating rotationally symmetrical bearing parts, which define a concentric and/or coaxial bearing gap, provided with a 3-dimensional structure for providing a hydrodynamic pressure, by application of a uniform thickness coating layer (3), which is partially removed via a high energy machining beam (4), e.g. a laser beam.

USE - The manufacturing method is used for a hydrodynamic bearing for a spindle motor rotor which rotates at a high revs, e.g. for a disc memory.

ADVANTAGE - The method allows formation of a 3-dimensional structure on a curved surface.

DESCRIPTION OF DRAWING(S) - The figure shows an

enlarged cross-section through  
a rotor with an applied coating layer at 2  
successive manufacturing stages.

Coating layer 3

High energy machining beam 4

CHOSEN-DRAWING: Dwg.1/3

DERWENT-CLASS: P55 P56 Q62 X24

EPI-CODES: X24-D03;